File

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
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DALLAS, TX 75202-2733

NOV 03 2004

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Mr. Scott Bruner
Interim Director
Arkansas Oil and Gas Commission
3309 Phoenix Avenue
Fort Smith, Arkansas 72903

Dear Mr. Bruner:

Enclosed is the fiscal year 2003 (FY2003) end-of-year evaluation report for the Underground Injection Control (UIC) Program of the Arkansas Oil and Gas Commission (AOGC). We recently learned from Gary Looney that you did not receive a copy of the final report, which we believed had been sent in January of this year. Prior to that, a draft report was sent to Mr. Looney for review. His comments were incorporated into the final report. The staff of AOGC is commended for the strong field presence, in particular, the witnessing of all mechanical integrity tests in the Class II and Class V programs.

If you have any questions, please contact me at (214) 665-7150, or your staff may contact Mr. Omar T. Martinez at (214) 665-8485.

Sincerely yours,

Larry Wright

Larry D. Wright
Chief
Source Water Protection Branch

Enclosure

cc: Gary Looney, UIC Director, AOGC

End-Of-Year (EOY) Evaluation Report
Arkansas Oil and Gas Commission
Underground Injection Control Program

State Fiscal Year (FY) 2003
October 1, 2002 - September 30, 2003

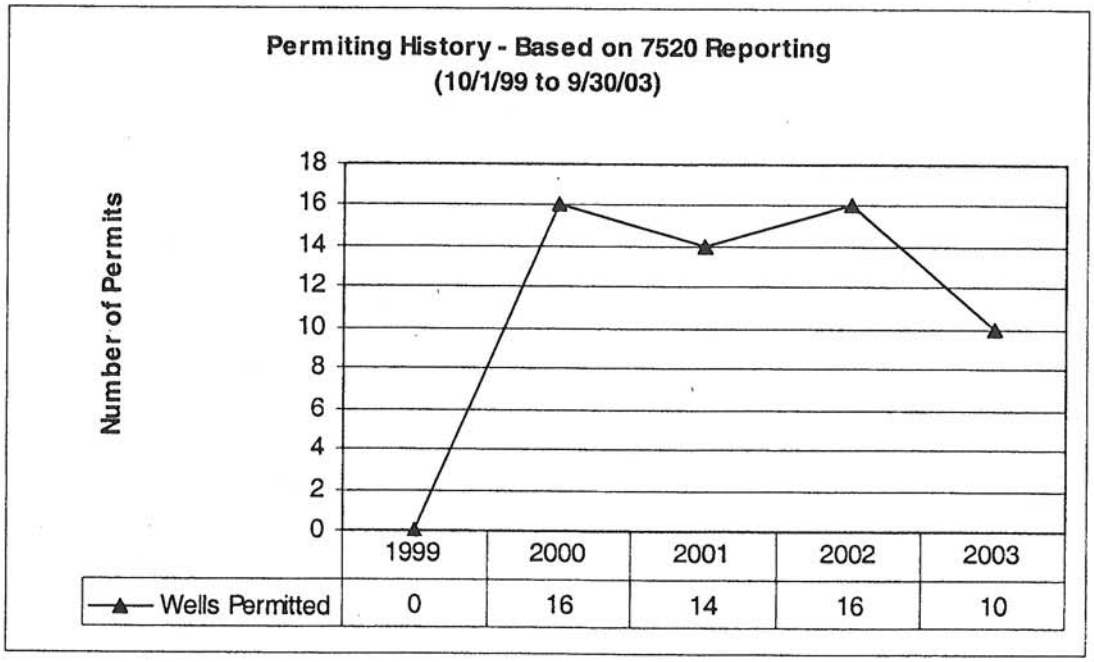
The Arkansas Oil and Gas Commission (AOGC) maintains primacy on oil and gas related injection activities (Class II wells) and shares enforcement responsibility with the Arkansas Department of Environmental Quality (ADEQ) on bromine related (Class V) injection activities in the State of Arkansas. AOGC does not receive grant funds from EPA. Therefore, no grant-related deliverables or work plans are required. However, AOGC must satisfy reporting requirements detailed in the 1983 Memorandum of Agreement (MOA) for delegation of primacy, and maintain an effective program. EPA Region 6 conducts an annual evaluation of this program as part of its oversight responsibility.

FY2003 ACTIVITIES

Inventory

The Underground Injection Control (UIC) Department of the AOGC currently regulates approximately 566 active Class II disposal/injection wells and 74 Class V bromine-related brine disposal wells. The staff consists of an engineer, an inspector and an administrative assistant, with cumulative experience of 26 years in UIC and 43 years in total service to the AOGC. Table 1 summarizes the permitting history of Class II and Class V wells based on EPA reporting form 7520. A total of 10 permits were issued or modified. All permits issued this reporting period were for Class II wells.

Table 1 - Permitting History - Class II and Class V Wells



Activities

Table 2 below summarizes strategic activities reported for Class II and Class V wells during FY2003.

Table 2 - 2003 Field Activities

Activity	Class II	% of total	Class V	% of total
new permits	10	2	0	0
well inspections	219	39	60	81
MIT's conducted	132	23	32	43
MIT's witnessed	132	100	32	100
MIT violations*	11	8	0	0
plugging and abandonments	7	1	0	0
monitoring and reporting violations*	27	5	0	0
total violations*	42	7	0	0

* May be multiple violations for a single well.

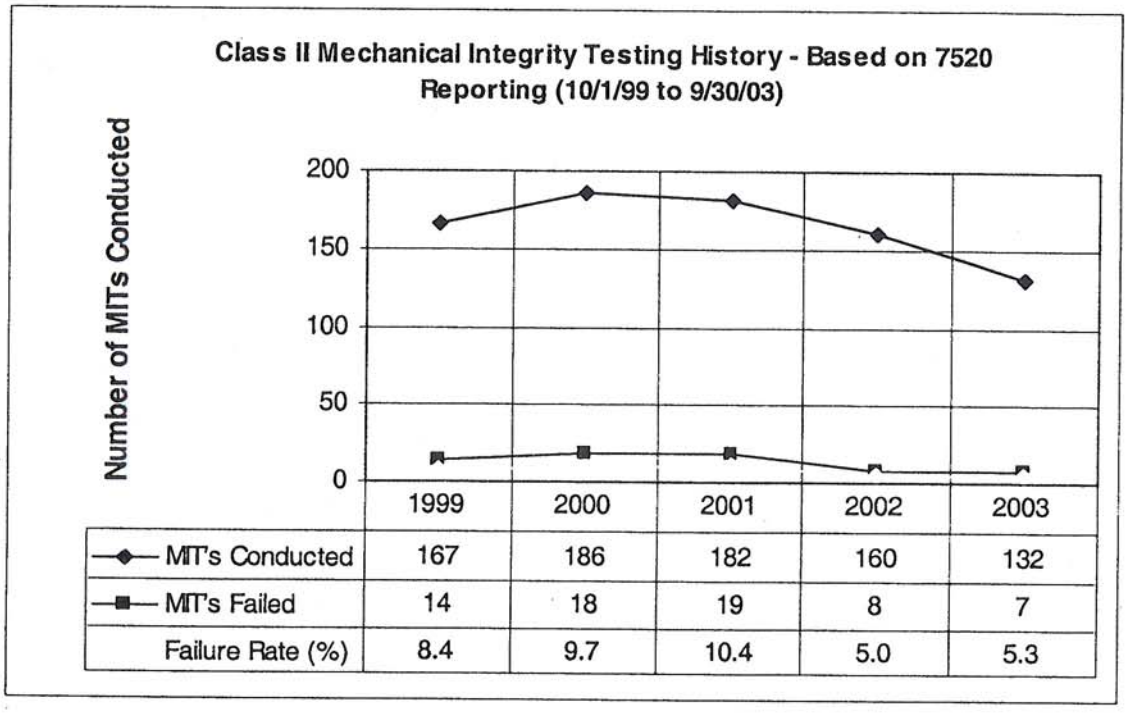
Mechanical Integrity Testing

AOGC employs one full-time UIC inspector who witnesses 100 percent of all mechanical integrity tests (MITs) conducted on Class II and Class V wells. This far exceeds the EPA guidance recommendation of at least 25 percent for Class II wells and AOGC is commended for this effort. Generally, a well is required to pass an MIT once every five years unless a condition exists which requires more frequent monitoring. The UIC inspector keeps an annual record of which wells will require MITs and contacts the operator by letter as to when the test is scheduled to be performed. If a MIT fails and it appears that there is a casing leak, the well is shut-in immediately. If however, it appears to only be a tubing-packer problem, the operator has up to 90 days to repair and successfully retest. Most of the time, these wells are repaired and successfully retested within 30 days. If the well is not successfully retested within the 90 days and was not previously shut-in, it is then shut-in. The operator then has 60 additional days to repair and successfully retest to maintain a valid permit. If it still fails MIT after 150 days, the operator's authority to inject is terminated.

Class II Wells

Six new Class II permits were issued in FY2003 and 39 percent of the currently active Class II injection wells were inspected during FY2003. For Class II, the number of MIT violations represents eight percent of the total number of MITs. Failed MITs were primarily a result of tubing and/or packer failure. The majority of the total violations were related to monitoring and reporting requirements. Table 3 summarizes MIT history since 1999 based on Form 7520 reports.

Table 3 - Mechanical Integrity Testing History - Class II Wells

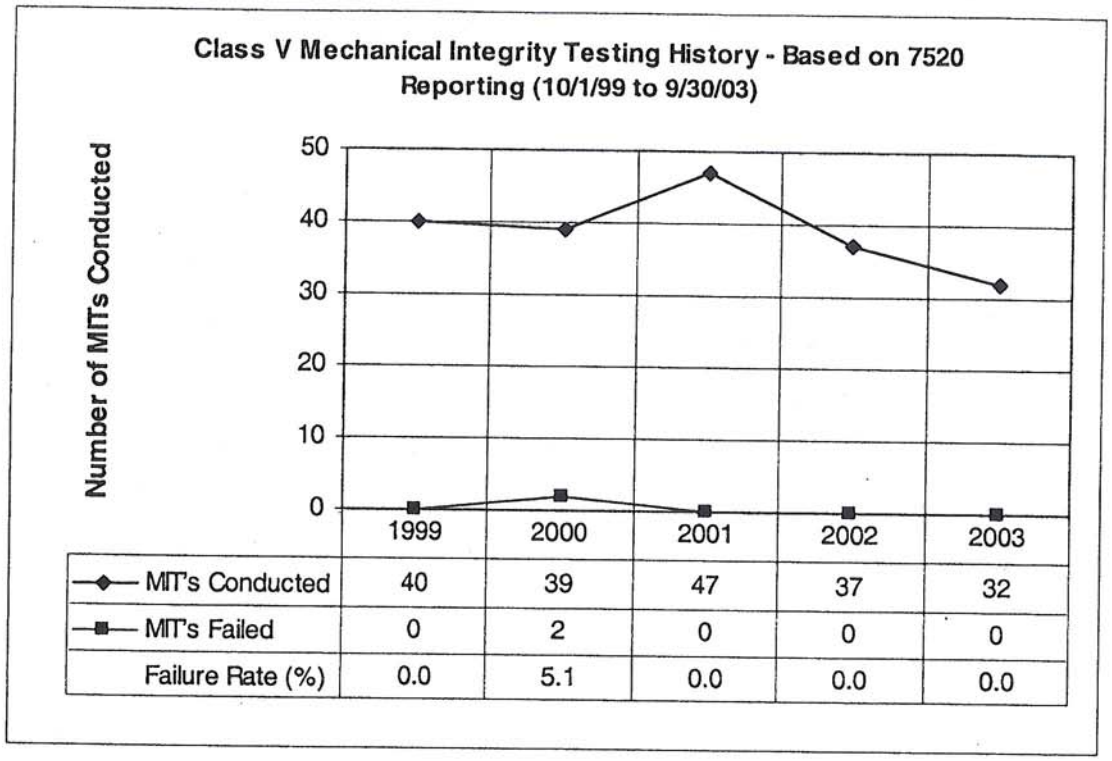


	1999	2000	2001	2002	2003
MIT's Conducted	167	186	182	160	132
MIT's Failed	14	18	19	8	7
Failure Rate (%)	8.4	9.7	10.4	5.0	5.3

Class V Wells

There were no Class V permits issued this year, but 81 percent of the approximately 74 wells were inspected in FY2003. Sixty percent of the Class V wells were evaluated with MITs. All Class V wells are required to be tested once every five (5) years, however those constructed with packerless completions are required to be tested annually. Wells with packerless completions are tested by using a coiled tubing unit with an inflatable packer or, a radioactive tracer (RAT) test is performed. There were no MIT violations, and no monitoring and reporting violations for Class V wells. Table 4 summarizes MIT history since 1999 based on Form 7520 reports.

Table 4 - Mechanical Integrity Testing History - Class V Wells



	1999	2000	2001	2002	2003
MIT's Conducted	40	39	47	37	32
MIT's Failed	0	2	0	0	0
Failure Rate (%)	0.0	5.1	0.0	0.0	0.0

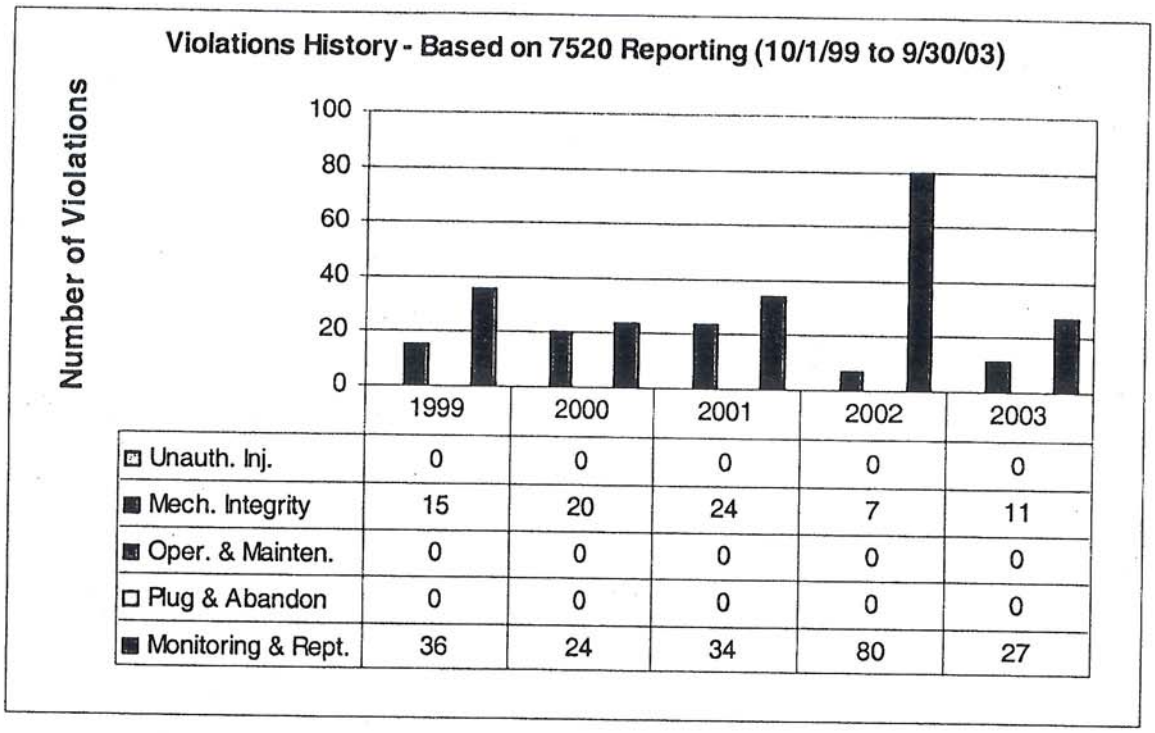
Enforcement Activities (Class II & Class V)

Forty-two enforcement actions were necessary for compliance during the fiscal year. If an operator is in violation, they are notified in writing. If the operator does not comply within the specified timeframe, AOGC may either:

(1) Cancel the Authority to Dispose
(2) Cancel the Authority to Produce and Transport
(3) Issue A Show-Cause Order For Hearing
(4) Levy Fines, or
(5) Any Combination Of These As Deemed Necessary

During FY2003 there were no compliance orders or fines levied by AOGC and no endangerment to underground sources of drinking water (USDW) were reported or discovered from injection wells. Table 5 summarizes the violations history of Class II and Class V wells based on Form 7520 reporting.

Table 5 - Violations History - Class II and Class V Wells



	1999	2000	2001	2002	2003
Unauth. Inj.	0	0	0	0	0
Mech. Integrity	15	20	24	7	11
Oper. & Mainten.	0	0	0	0	0
Plug & Abandon	0	0	0	0	0
Monitoring & Rept.	36	24	34	80	27

Reporting Requirements

All reports as required in the MOA, were submitted to EPA by AOGC, including quarterly reports on Form 7520 and the annual report for FY2003. The annual inventory was also submitted timely as required. Since the AOGC shares primacy for the Class V wells with the ADEQ, the quality assurance requirements are submitted through the ADEQ UIC Program. Both agencies work closely to ensure cooperation related to UIC primacy programs and the protection of underground sources of drinking water.

Plugging and Abandonment

Plugging and abandonment is the responsibility of the operator. AOGC will conduct the plugging activity when the operator can not be located or no longer exists and the well is considered a hazard to life, health, or the environment. The exact procedure will be based upon the known construction parameters or problems encountered in each well. The plugging will consist at the minimum of a 100' cement plug or cast iron bridge plug with 10' of cement on top, or very close to the perforated interval, and a plug near the surface with spacing fluid between the plugs. The casing is then cut off 3' below plow depth and a plate is welded to the remaining casing.

AOGC enforces the plugging of abandoned wells primarily upon complaint. Approximately 98 percent of wells are plugged by the operator according to regulations. When wells are not plugged by the operator, AOGC will perform the operation by placing a plug (either a cast iron bridge plug with 10' of cement on top or a 100' cement

plug) over the perforated interval, filling the casing with mud-laden fluid, and placing another plug near the surface. The exact procedure may differ based on the construction parameters or problems encountered downhole in each well.

EPA's standard for plug and abandonment of injection wells is that it be done in a manner that will not allow fluid movement into or between USDWs. AOGC's two plug abandonment procedure does not require cement across the lowest USDW, relying instead on the mud interval to prevent any potential inter-formational flow. AOGC is encouraged to consider the additional containment capacity offered by a strategically placed cement plug in lieu of mud laden fluid.

AOGC requires that new disposal wells have financial assurance, either by bank letter of credit, corporate surety bond, or other means as approved by the Commission. Wells in existence prior to Safe Drinking Water Act (SDWA) requirements may not have financial assurance. However, well abandonment by operators has not been an enforcement problem in the State.

File Review

EPA Region 6, Ground Water/UIC Section, conducted a file review on twelve Class II injection wells for AOGC UIC Program. The original review at AOGC was initiated on June 12, 2003, and the files were selected at random. The file review found none of the wells to exceed the maximum injection pressure as stated in the permits. This consisted of reviewing the well files for the application process, financial responsibility, volume and pressure reporting, mechanical integrity testing frequency, and technical reviews of selected injection wells. The findings of this review were favorable overall. AOGC is staffed with competent and conscientious personnel, and operates a UIC program that is effective in protecting surface and underground sources of drinking water, and the environment.

Plugging of Orphan Wells

AOGC started soliciting bids on May 9, 2003, to plug and abandon unclaimed wells, referred to as "orphan wells." The work on these wells commenced on June 9th of this year, and its cost is covered with funds collected from operators that pay a conservation assessment tax.

This is the first year AOGC has done this project. At this time, out of 45 orphan wells that were scheduled for plugging, 38 have already been plugged and seven are pending. Some tank batteries were connected to disposal or injection wells. Equipment and metal salvaged will be either sold as scrap or used for future operations. The Secondary Oil Corporation of Arkansas, which is no longer in business, previously owned most of the orphans wells being plugged.

These are shallow wells that range from 1400' to 2100' in depth. The wells are completed in the Nacatoch (1400') and the Buckrange (2100') formation. AOGC will

develop a plugging procedure based upon the known construction of the well, but at a minimum will place a 100' cement plug over the producing interval and another plug at or near the surface. Plug sizes and procedures may vary otherwise.

AOGC selects wells that are essentially considered high priority to the environment and plans to continue its annual commitment to plugging orphan wells.

Summary

In conclusion, the UIC program is adequately staffed with competent employees and no major problems were identified in the program. The Class II and Class V (bromine-related) underground injection control programs administered by AOGC continue to be well managed and include a strong field component.